Evaluating Post-Surgical Analgesia Use in Rodents at University of Wisconsin-Madison

Melissa Hunsley, PhD, CPIA; Sarah Johnson-Schluter, BS; Derrik Duchesneau, MS
University of Wisconsin-Madison

Problem Statement:
The University of Wisconsin-Madison conducts research with animals at over 30 sites using approximately 900 animal use protocols. With such a large animal program, research veterinarians struggle to verify that all investigators using mice and rats adhere to the analgesic regimens described in their approved animal care and use protocols. To assess the level of compliance, post-approval monitoring (PAM) staff in conjunction with the attending veterinarian initiated a comprehensive survey of lab practices for post-surgical rodent analgesia.

Description of the research:
In 2015, PAM personnel at the Research Animal Resources and Compliance (RARC) unit at UW-Madison set out to determine how closely investigators followed their approved analgesic regimen for surgical pain relief on mice and rats. We sorted through ~900 active protocols, contacted investigators, determined which labs were actively conducting survival surgery on rodents, interviewed them, and provided support. From the 536 protocols using mice or rats, 243 listed survival surgery. We then contacted these principal investigators (PIs) to ask if survival surgery had been conducted over the previous 12 months. For the 82 labs that verified surgery had occurred, we made unannounced visits to each, to inspect surgical records and speak with the surgeons. We also gathered information, such as suggestions for harmonizing analgesic regimens across labs and improving medical record training. Most labs (60%) followed their analgesic regimen exactly as written in their protocol, and another 27% were giving analgesics, but the regimen was not followed exactly. The remainder either had no records, but indicated analgesics had been given (7%) or confirmed that they did not give analgesics (6%). Though time-intensive, this project verified that most labs were using analgesics appropriately for rodent survival surgery. These results, along with information gathered from the researchers, helped us to improve several processes within the RARC. Additionally, we provided research personnel with surgery record templates, medical documentation training, veterinary staff contact information, and other feedback as appropriate, to improve compliance and animal welfare. When the project was complete, we reported our findings to each of the five IACUCs, and the Institutional Official reported the results to the Director of Compliance Oversight at the Office of Laboratory Animal Welfare at NIH. The Director responded, complimenting the University for completing such a proactive undertaking to ensure excellent animal care.